Balancing Dragonfly

Kit contains:

- 1 Dragonfly template
- 1 Sharpened pencil
- 1 Piece of pool noodle
- 4 Paper clips

You will need: scissors, glue, and coloring supplies (optional).

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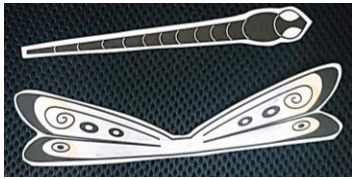
INSTRUCTIONS

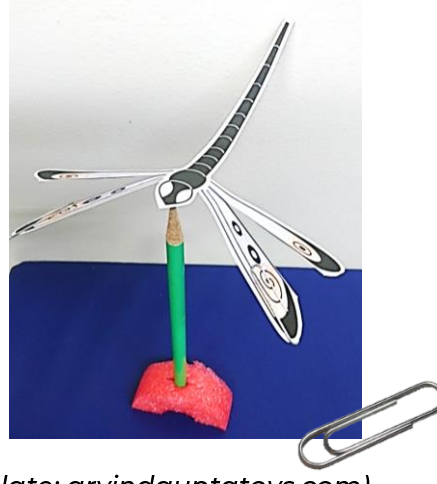
Step 1. Cut out the dragonfly body and wings. You can leave white space, but be sure to separate the wings. Color if desired.



Step 2. Glue the dragonfly wings to the body as shown. Bend the wings and head slightly down and curve the tail up.

Step 3. Stick the pencil upright through the slit in the pool noodle piece.

Step 4. Balance the dragonfly on the tip of the pencil. This might take some work! Try adding paper clips to the wings. Can you make it balance on the tip of its “nose”? How else can you balance the dragonfly?



(Dragonfly template: arvindguptatoys.com)

AT THE CENTER OF THINGS...

Try this: Stand with your left side against the wall. Make sure your left foot is also against the wall. Raise your right foot to the side.

What happened? Why?

Your **center of mass** (also known as **center of gravity**) is where the most of your weight is concentrated. Your center of mass is around the middle of your body. When you stand with your side against the wall, you are pushing your center of mass off-balance. Normally, you would tilt to the left or stick out your left arm to compensate, but the wall won't let you. Therefore, you cannot lift your right foot without falling over.

(Image source: physicsforanimators.com)